UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF COMMERCIAL FISHERIES

CALIFORNIA FISHERY MARKET NEWS MONTHLY SUMMARY

JANUARY 1968

PART II–Fishing Information*

Sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists

CONTENTS

	Page
Survey Results Summarized	1
Sea Surface Temperature Charts, Eastern Pacific Ocean, January 1968	4

U. S. Department of the Interior
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P. O. Box 271
La Jolla, California 92037

*Part 1 - "Fishery Products Production and Market Data" is issued by the Bureau of Commercial Fisheries, Market News Service, U.S. Custom House, Terminal Island, California

SURVEY RESULTS SUMMARIZED

Responses to the information survey distributed on November 9, 1967, to approximately 900 subscribers to this publication have exceeded all expectations. Thirty-five percent of the individuals queried have responded up to the present time.

Responses fell into four major categories. Percentages by category were as follows: commercial fishing, 34 percent; sport-fishing, 14 percent; scientific community, 47 percent; and miscellaneous, 5 percent. The latter group of replies included 4 teachers, 2 newspaper writers, 2 food processors, 1 aquarium facility, 1 kelp harvesting company, 1 lifeguard agency, 1 park planner, 1 lawyer, 1 trading company, and 1 fishermen's union representative. The diversity of this group provides good indication of the breadth of the economic community having direct or related interests in our summaries of fishing and oceanographic information.

Regardless of major area of interest, about 80 percent of the individual respondents approved in principle every phase of our information reporting services as presently rendered. General approval was registered by all groups answering the questions pertaining to the quality and design of the chart materials appearing in the monthly and 15-day publication series. Criticisms and suggestions for improvement were offered in the Part V - Comments section of the survey on fully 100 of the 300 replies returned. The ten most frequently-discussed items are as follows:

1. Requests for publication of additional charts showing the specific areas where commercial quantities of albacore were caught in the previous monthly and 15-day calendar intervals;

2. A smaller-scale, more detailed sea surface temperature chart for the nearshore zone up to 50 miles offshore for California, Oregon and Washington waters;

3. A prognostic sea surface temperature chart to be published for the succeeding monthly and 15-day calendar intervals;

4. Broadcasting of a time-test signal prior to scheduled fishing information transmissions by Radio Station WWD;

5. Increased coverage of daily fishing information broadcasts and bulletins to include other species (especially salmon), and to update with more fishing information;

6. Requests for Radio Station WWD to transmit fishing information on fishing frequencies (2638, 2738 kcs.) or via commercial or Coast Guard repeater stations;

7. Extend Supplements I and II (sea surface temperature charts at 15-day intervals) to span the entire year instead of April 15-October 31;

8. Initiate and publish charts depicting average surface winds, wind direction and barometric pressure fields by month and by 15-day calendar intervals;

9. Extend the area covered by Supplements I and II (sea surface temperature charts at 15-day intervals) to include the Gulf of Alaska coast as far northward as Seward Peninsula; and

10. Extend present monthly sea surface temperature chart coverage to include the western north Pacific.

Almost all respondents generally agreed that the California Fishery Market News Monthly Summary Part II - Fishing Information and Supplements I and II were both useful and highly informative. About 90 percent of the fishing community indicated that the fishing bulletins and forecasts received by mail were "good" to "excellent," and that they did influence their decisions as to where to look for fish.

However, the fishermen indicated that over 85 percent do not have shipboard radio capability to utilize fully the radio broadcasts emanating from Radio Station WWD on frequencies higher than 4,415.8 kcs. Fifty percent of the respondents cannot read frequencies higher than 2,638 and 2,738 kcs. Fully 21 percent of the fishermen rely on other boats to copy WWD broadcasts and then to relay the information over the already-overcrowded fishing frequencies (2,638 and 2,738 kcs.). Of those individuals receiving WWD broadcasts at sea, approximately 83 percent of the respondents indicated that they could not hear WWD from distances greater than 300 miles. Only 17 percent could read WWD at distances exceeding 800-900 miles. Furthermore, the majority of these individuals indicated that they owned double sideband (AM) radio gear (scheduled to be phased out of service by FCC requirements

to shift to single sideband by January 1, 1974). Only 25 percent of those responding indicated that they planned to purchase new shipboard radio equipment in the next 2 years.

Among those listening to WWD broadcasts regularly, 90 percent of the respondents answered the questions on schedule, timing of broadcasts, broadcast delivery, and information content by marking "good" and "excellent;" 10 percent of the correspondents checked the "fair" or "poor" boxes on these questions.

The above summary represents briefly the results gained from the information survey. Those items which can be incorporated easily into our 1968 season's schedule will be achieved as quickly as funding and personnel resources allow. Those suggestions which cannot reasonably be instituted this year will form the basis for planning a long-range, expanded program of activity in the future. All fishermen should also note from the results outlined above that the majority of the boat operators cannot now fully utilize existing radio broadcast services at WWD until they "grade-up" their existing communications gear. By purchasing single sideband equipment in the next few years, most operators should be able to work WWD voice frequencies up to as high as 22,000 kcs. and at ranges up to 2,000 miles, depending on the cost and type of gear selected. In addition, all fishermen having new, FCC type-accepted equipment will then be properly outfitted when the mandatory time limit for conversion to SSB becomes effective.

Staff, Fishery-Oceanography Program
February 9, 1968

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
JANUARY 1968

Acknowledgements

The following organizations and stations contributed data for the January 1968 charts:

U. S. Bureau of Commercial Fisheries Exploratory Fishing and Gear Research Base, Seattle, Washington
U. S. Bureau of Commercial Fisheries Biological Laboratories La Jolla, California; Honolulu, Hawaii; and Seattle, Washington
U. S. Coast Guard Air Station, San Diego, California
U. S. Coast Guard, Rockaway
U. S. Naval Communication Station Balboa, Fort Amador, Canal Zone
U. S. Naval Weather Service, Fleet Numerical Weather Facility Monterey, California
Environmental Science Services Administration
U. S. Weather Bureau, San Diego, California
U. S. Weather Bureau Forecast Center, Los Angeles, California
Hopkins Marine Station, Pacific Grove, California by J. P. Balesteri
Instituto de Fomento Pesquero, Santiago, Chile by Izadore Barrett
Inter-American Geodetic Survey by David Ortega at Manzanillo, Mexico; L. A. Peren at Pt. Armuelles, Panama; V. E. Castillo at Tumaco, Colombia; S. Valenzuela at La Libertad, Ecuador; LMS, EGS, MCHF at Talara, Peru; Felise Falcon at San Juan, Peru; Arica, Antofagasta, Caldera, Valparaiso, and Talcahuano, Chile, through the courtesy of St. Hellmuth A. Sievers C. at the Instituto Hidrografico de la Armada, Valparaiso, Chile
Inter-American Tropical Tuna Commission, La Jolla and Terminal Island, California
Kelco Company, San Diego, California
Matson Navigation Company, San Francisco, California, SS Californian
Oregon State University, Department of Oceanography, Corvallis, Oregon R/V Yaquina
Pacific Missile Range, Range Operations Department, Geophysics Division, Point Mugu, California
Pacific Oceanographic Group, Nanaimo, British Columbia, by H. J. Hollister from observations by G. C. Wilks at Langara Island Light; W. K. Richardson at Cape St. James Light; Lily Collins at Quatsino Lightstation; O. A. Edwards at Amphitrite Point Light
Scripps Institution of Oceanography, La Jolla, California by Margaret Robinson and Hans Klein
W. R. Grace and Company, New York by Dr. I. William Lane

Charts

Figure 1.--Mean sea surface temperatures (°F) derived from approximately 9000 observations. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 2.--Deviation of sea surface temperatures (°F) from long term charts of H.O. 225. Hatched areas are colder in 1968.

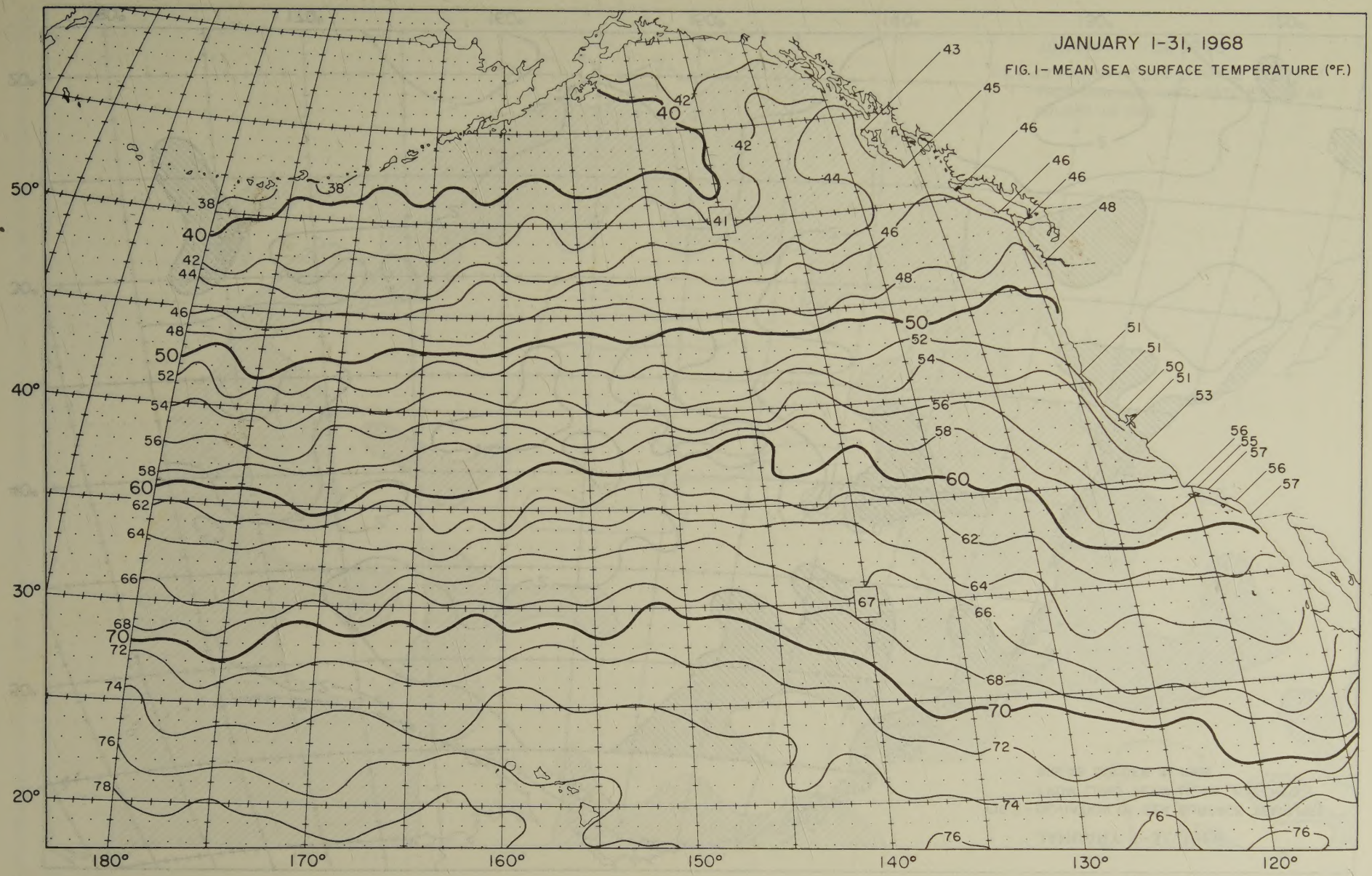
Figure 3.--Deviation of sea surface temperatures (°F) from those of January 1967. Hatched areas are colder in 1968.

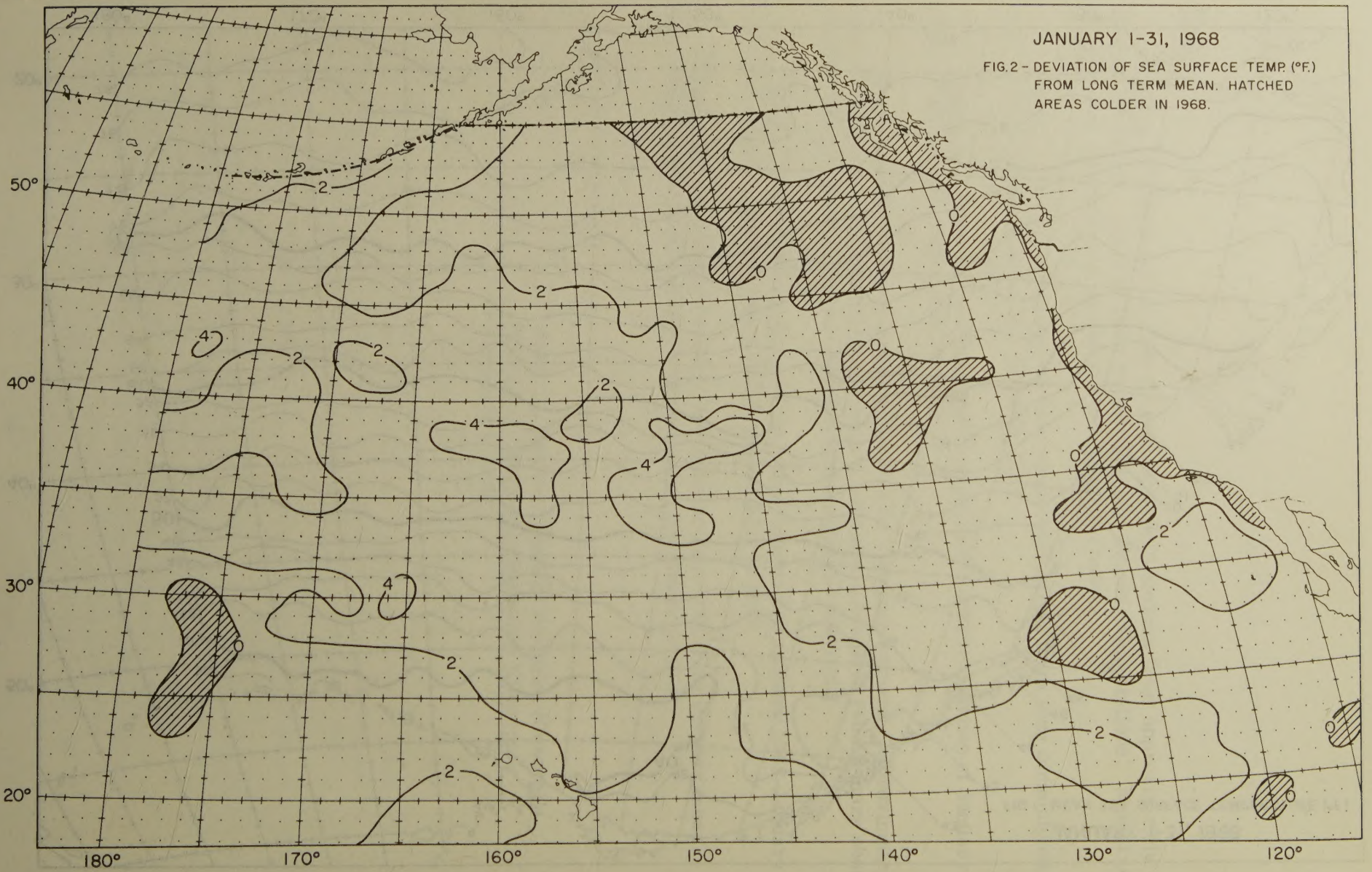
Figure 4.--Sea surface temperatures (°F) by 1-degree squares, approximately 3000 observations. Line under temperatures indicates average of two or more observations. Numerals on shore are temperatures at coastal stations.

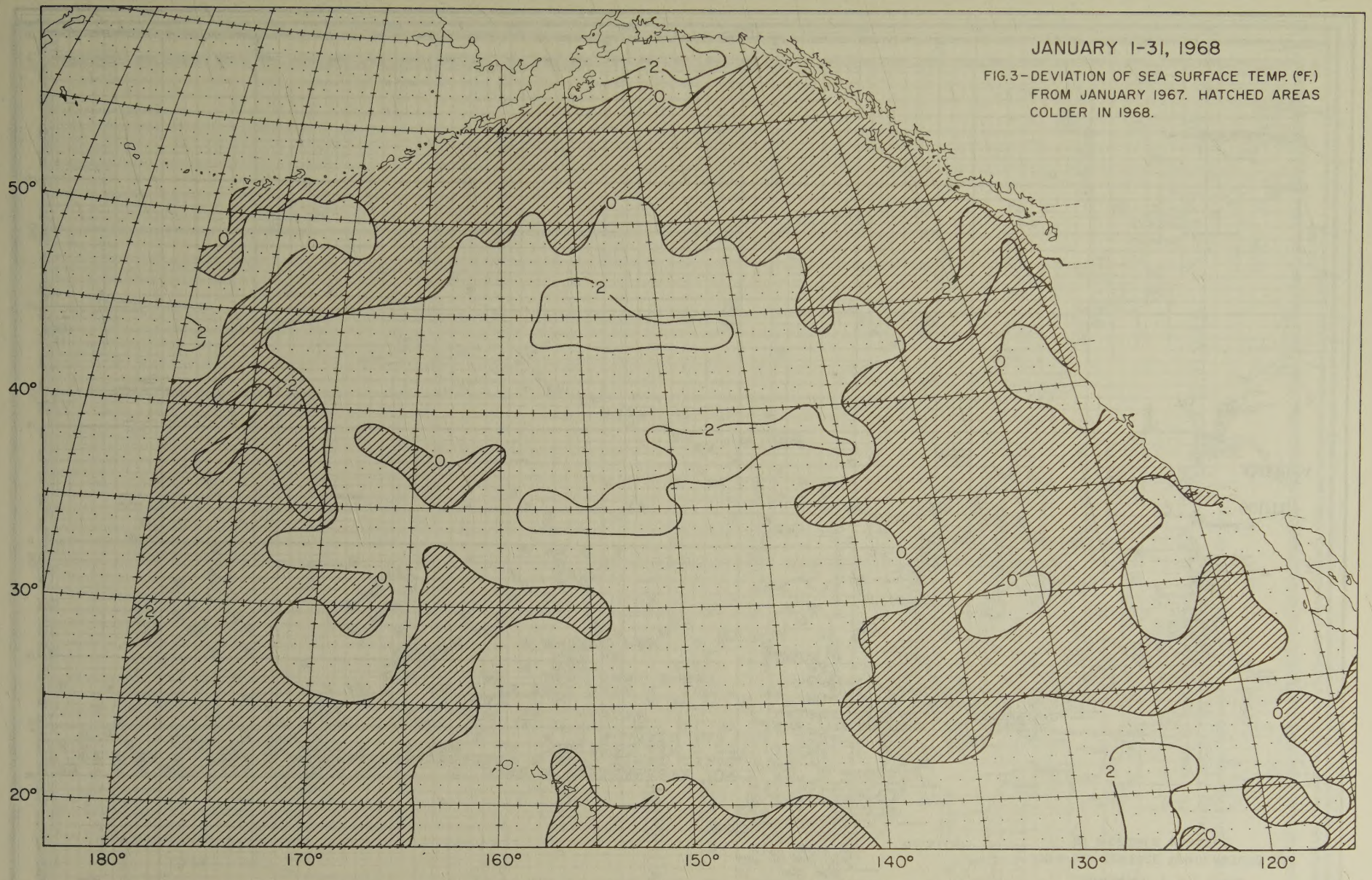
Figure 5.--Deviation of sea surface temperatures (°F) January 1968-January 1967 by 1-degree squares. Shaded areas are colder in 1968.

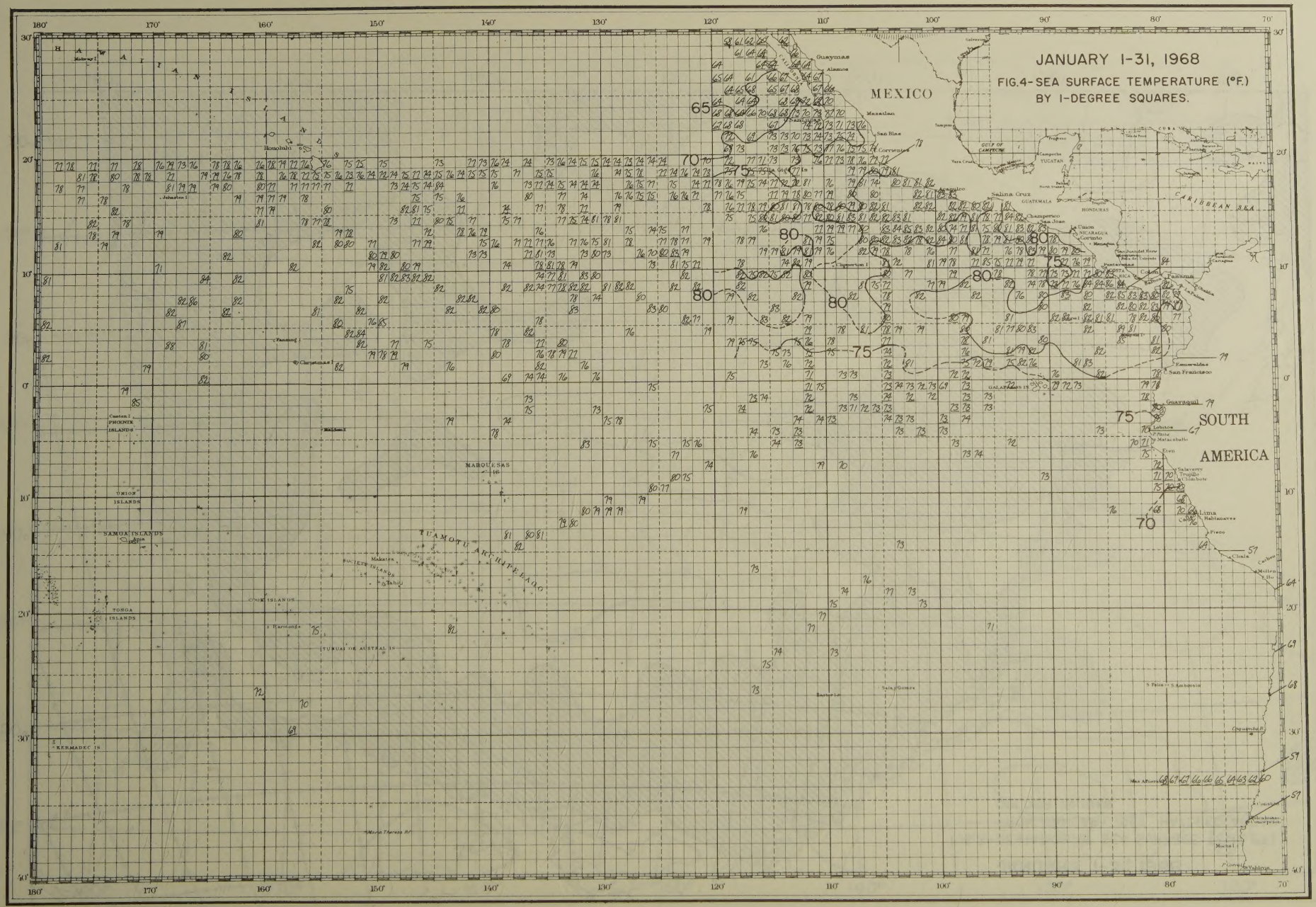
Figure 6.--Deviation of sea surface temperatures (°F) from 12-year mean (1947-1958) by 2-degree squares. Shaded areas are colder in 1968.

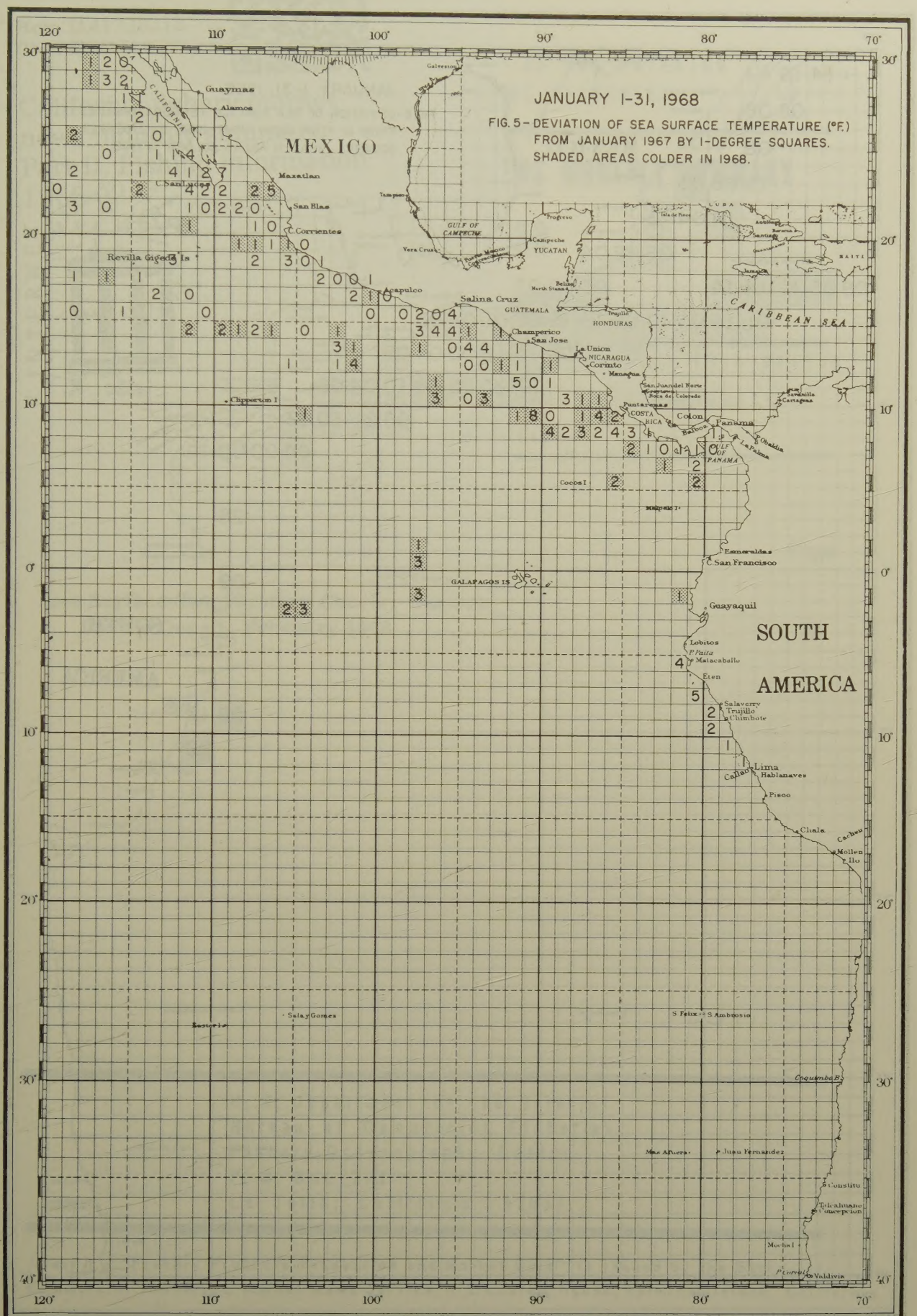
Janes A. Renner, Fishery Biologist (General)
Kenneth S. Raymond, Scientific Illustrator
February 9, 1968

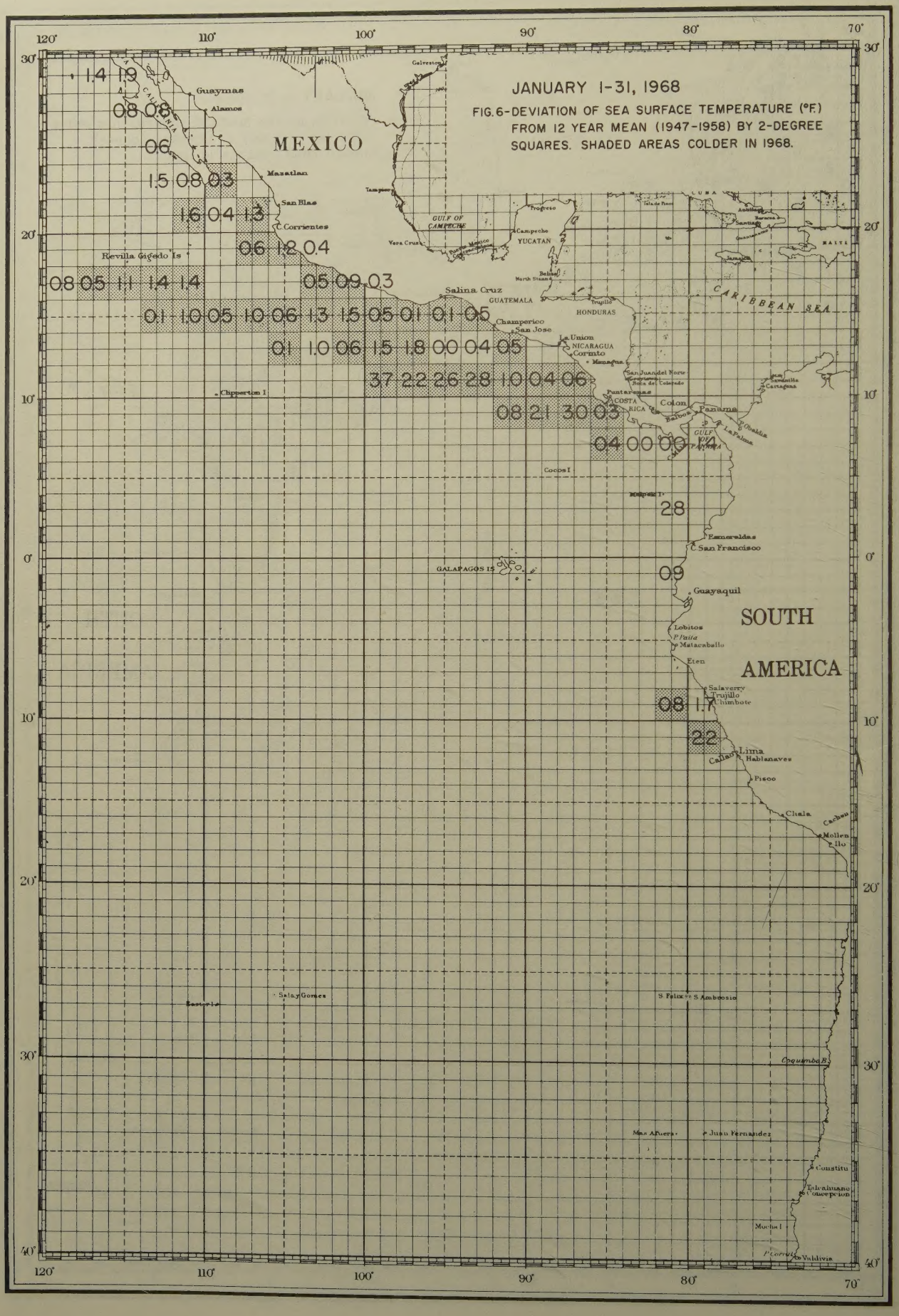

JANUARY 1-31, 1968
FIG. 1 - MEAN SEA SURFACE TEMPERATURE (°F.)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
38
40
42
44
46
48
50
52
54
56
58
60
62
64
66
68
70
72
74
76
78
41
67
43
45
51
53
55
57


JANUARY 1-31, 1968
FIG. 2 - DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1968.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
0
2
4


JANUARY 1-31, 1968
FIG. 3 - DEVIATION OF SEA SURFACE TEMP. (°F.) FROM JANUARY 1967. HATCHED AREAS COLDER IN 1968.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
2
0


JANUARY 1-31, 1968
FIG.4-SEA SURFACE TEMPERATURE (°F.)
BY 1-DEGREE SQUARES.
MEXICO
SOUTH
AMERICA
HAWAIIAN ISLANDS
Honolulu
Johnston I.
Palmyra I.
Christmas I.
Canton I.
PHOENIX ISLANDS
UNION ISLANDS
SAMOA ISLANDS
TONGA ISLANDS
COOK ISLANDS
MARQUESAS
TUAMOTU ARCHIPELAGO
SOCIETY ISLANDS
Tahiti
Makatea
TUBUAI OR AUSTRAL IS
KERMADEC IS
Easter I.
Sala y Gomez
Guaymas
Alamos
Mazatlan
San Blas
Salina Cruz
GUATEMALA
HONDURAS
NICARAGUA
Corinto
Panama
Guayaquil
Lobitos
Talara
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Arica
Iquique
Antofagasta
Coquimbo
Valparaiso
Concepcion
Talcahuano
Corral
Mocha I.
Juan Fernandez Is.
CARIBBEAN SEA
GULF OF CAMPECHE
YUCATAN
CUBA


JANUARY 1-31, 1968
FIG. 5 - DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM JANUARY 1967 BY 1-DEGREE SQUARES. SHADED AREAS COLDER IN 1968.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CALIFORNIA
GULF OF CAMPECHE
GULF OF PANAMA
YUCATAN
GUATEMALA
HONDURAS
COSTA RICA
NICARAGUA
CUBA
HAITI
JAMAICA
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Revilla Gigedo Is
Acapulco
Salina Cruz
Champerico
San Jose
La Union
Corinto
Managua
Chippertm I
Panama
Colon
Cocos I
Esmeraldas
San Francisco
Guayaquil
Lobitos
P Pitita
Malacaballo
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Hablanaves
Pisco
Chala
Cachau
Mollendo
Ilo
Sala y Gomez
S Felix
S Ambrosio
Coquimbo
Mas Afuera
P Juan Fernandez
Constitu
Talcahuano
Concepcion
Mocha I
Valdivia
Galveston
Tampico
Vera Cruz
Progreso
Campeche
Belize
Tela de Roco
Trujillo
Roca de Colorado
Bocas
Obaldia
La Palma
Cartagena
Barranquilla
Santiago
Jamaica
Quemados
Asabon
Barcoa
Pantanegas
San Juandel Norte
Roca Clipperton
Roca Redonda
Roca Sal
Roca Partida
Roca Pinta
Roca Wolf
Roca Darwin
Roca Culpepper
Roca Wenman
Roca Redonda
Roca Sal
Roca Partida
Roca Pinta
Roca Wolf
Roca Darwin
Roca Culpepper
Roca Wenman


JANUARY 1-31, 1968
FIG. 6-DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM 12 YEAR MEAN (1947-1958) BY 2-DEGREE SQUARES. SHADED AREAS COLDER IN 1968.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CAMPECHE
GULF OF PANAMA
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
C Corrientes
Revilla Gigedo Is
Salina Cruz
GUATEMALA
HONDURAS
Champerico
San Jose
La Union
NICARAGUA
Corinto
Managua
Punta Arenas
COSTA RICA
Colon
Panama
Cocos I
Esmeraldas
C San Francisco
Guayaquil
Lobitos
Talara
Matacaballo
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Hablanaves
Pisco
Chala
Cabeza
Mollendo
Ilo
Salas y Gomez
S Felix
S Ambrosio
Juan Fernandez
Constitu
Talcahuano
Concepcion
Mocha I
Corral
Valdivia
Progreso
Campeche
YUCATAN
Vera Cruz
Tampico
Belize
Trujillo
Islas Swan
CUBA
JAMAICA
HAITI
Barranquilla
Cartagena
Chiriqui
Bocas
La Palma
Chatham I
1.4 1.9
0.8 0.8
0.6
1.5 0.8 0.3
1.6 0.4 1.3
0.6 1.2 0.4
0.8 0.5 1.1 1.4 1.4
0.5 0.9 0.3
0.1 1.0 0.5 1.0 0.6 1.3 1.5 0.5 0.1 0.1 0.5
0.1 1.0 0.6 1.5 1.8 0.0 0.4 0.5
3.7 2.2 2.6 2.8 1.0 0.4 0.6
0.8 2.1 3.0 0.3
0.4 0.0 0.0 1.4
2.8
0.9
0.8 1.7
2.2
10°
20°
30°
40°
0°
120°
110°
100°
90°
80°
70°